

REMARKS

Claims 1, 14 and 27 stand rejected under 35 U.S.C. 102(e) as anticipated by Watanabe (6114,824).

The examiner's rejections are respectfully traversed.

Applicant's invention, as recited in Claim 1, for example, recites a robot comprising a storage unit for storing a first robot control module, a data processor for executing the first robot control program module, and a data communicator for receiving a second robot control module. The claim goes on to recite that when the data communicator receives the second robot control program module, the second robot control program module is stored in the storage unit along with the first robot control program module and is executed by the data processor.

Watanabe discloses in Figure 1, for example, a first robot 1 and a second robot 4. The first robot 1 has a robot arm 2 and the second robot 4 has a robot arm 5. A pattern plate 3 is attached to the distal end of the arm 2 of the first robot, and a camera 6 is attached to the distal end of the arm 5 of the second robot. The first robot is controlled by a first robot control device 10, and the second robot is controlled by a second robot control device 11. The robot control devices are responsible for moving the arms of the robot. A visual sensor control device 20 is also provided which receives signals from the first and second robot control devices. The robot control device 10 calculates first calibration pattern data CPDr indicated at 12a in Figure 1 and this data is indicative of the coordinate values of the dot pattern element dots 3a, 3b, 3c ... (see Figure 2). The first calibration data is transmitted via a communication line 13 and interface 27 to RAM 23 and is stored therein as first calibration data 12a. Dot pattern data DPD indicated at element 24a is either input by a user through a keyboard or is alternatively input by means of a control program 22a. In column 4, lines 1-5, it is indicated that the camera 6 picks up image data of the dot pattern of the pattern plate 3 and delivers this dot pattern video data to the RAM 25 via the camera interface 28. The image processor 26 reads out the dot pattern data DPD 24a from the RAM 24 and also reads out the dot pattern video data (stored in RAM 25). Based on the data 24a and the video data,

the image processor 26 calculates second calibration pattern data CPDc indicated at 25a which is indicative of the coordinate values of the individual dot pattern element dots on the camera coordinate system and loads the calibrated data 25a into the RAM 25. The processor 21 then reads out the first and second calibration pattern data 12a and 25a from the RAMs 23 and 25 respectively and compares the two pattern data and calculates a calibration data CD indicated at 23a which includes camera parameters.

As may be seen from the above description, the data that is transferred from the first robot control device to the visual sensor control device is simply calibration data and is not a program or a program module. Data is simply transferred from the first robot control device to the RAM 23 and dot pattern video data is transferred from the camera 6 through the interface 28 to the RAM 25. Both of these data streams cannot be characterized as programs, but are merely input data to the program which is running on the CPU 21 and which is utilized to retrieve the above-enumerated data and calculate the calibration data CD indicated at 23a. Thus, while Watanabe may indeed have storage units for storing data such as RAMs 22-25, these RAM storage units are storing various kinds of data input from a keyboard, or a first robot control device or a camera. Presumably, the ROM 22 stores the robot control program data. Perhaps additional robot control program data is stored in the robot control devices 10 and 11, but such explanation is not given in the Watanabe reference. Moreover, Watanabe is completely silent about transferring any programs between the elements comprising the first robot control device 10, the second robot control device 11, and the visual sensor control device 20. As such, Watanabe does not disclose essential limitations set forth in applicant's Claim 1 and thus cannot serve as an anticipatory reference under 35 U.S.C. 102.

Claim 14 is similar to Claim 1, but the preamble is different in that a robot control system is recited. However, because of the similarity of the body of these two claims, the same arguments set forth above apply equally to Claim 14. As such, Claim 14 is likewise readily distinguishable from the Watanabe reference.

Independent Claim 27 recites a program storage medium storing a program which, when executed on a computer controlling a robot, causes the computer to perform the steps

of: receiving a first robot control program module from a communication line and writing the first robot control module in a recording medium of the robot; and receiving a second robot control program module from the communication line and writing the second robot control program module in the reading section of the robot along with the first robot control program module. Again, it may be seen that Claim 27 calls for the program storage medium to cause the computer to receive a first robot control program and a second robot control program, both of which are received from a communication line, and both of which are recorded in a recording section of the robot. No such corresponding structure in Watanabe since, as indicated above, Watanabe merely teaches the transfer of data between the various disclosed units and does not teach the transfer of any programs or program modules. As such, Claim 27 is likewise readily distinguishable from the Watanabe teaching.

In order for a reference to anticipate a claim, the reference must disclose each and every limitation recited in the claim. Inasmuch as Watanabe fails to disclose key elements of applicant's claim, Watanabe cannot stand as a Section 102 rejection. Thus, the rejection under 35 U.S.C. 102 must be withdrawn.


It is submitted that applicant's Claims 1, 14 and 27 are clearly patentable over the prior art. Further, the examiner has already indicated that Claims 8-13, 15-26 and 28-45 are allowed. The examiner has further indicated that Claims 2-7 are objected to and would be allowable if written in independent form. However, applicant points out that Claim 2 is already in independent form, and Claims 3-7 depend directly on independent Claim 2. Thus, it is submitted that Claims 2-7 are likewise in condition for allowance.

The application is now believed to be in condition for allowance and an early indication of same is earnestly solicited.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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By 

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